

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

270224
I2I33

United States
Department of
Agriculture
Soil
Conservation
Service
Boise
Idaho



WATER SUPPLY OUTLOOK FOR IDAHO

in Cooperation with Idaho State Department of Water
Resources, Idaho Soil Conservation Districts, and NOAA,
National Weather Service



May 1, 1984

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Up to 75 percent of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data effecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent as surveyed and marked locations in mountain areas. These measurements are repeated in the same location near the same dates each year. Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Snotel (snow telemetry) networks of automatic snow water equivalent and related data sensing devices, are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. A joint Soil Conservation Service and National Weather Service report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs. This report can be obtained from Soil Conservation Service, National Technical Center, Rm. 510, 511 NW Broadway, Portland, Oregon 97209.

In California, the program is coordinated by the California Department of Water Resources. The Canadian provinces of British Columbia and Alberta have comparable programs.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states.

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	2490 W. 26th Ave., Diamond Hill, Bldg. A, Denver, Colorado 80211
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	Room 443, Federal Building, 10 East Babcock, Bozeman, Montana 59715
Nevada	50 S. Virginia Street, P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	Federal Office Building, 100 East B. Street, Casper, Wyoming 82601

WATER SUPPLY OUTLOOK
FOR
IDAHO
and
Federal-State-Private Cooperative Snow Surveys

Issued by
Peter C. Meyers
Chief
Soil Conservation Service
Washington, D. C.

Released by
Stanley N. Hobson
State Conservationist
Soil Conservation Service
Boise, Idaho

In cooperation with
A. Kenneth Dunn
Director
Idaho Department of Water Resources
Boise, Idaho

and
Soil Conservation Districts
NOAA-National Weather Service
Idaho Power Company
FMC Corporation
Washington Water Power Company

Report prepared by
Snow Survey Staff
Gerald A. Beard
Snow Survey Supervisor
Soil Conservation Service
Boise, Idaho

Soil Conservation Service
Snow Survey Office
Rm. 345, 304 No. 8th Street
Boise, Idaho 83702

WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR MAY 1, 1984

The 1984 water supply outlook is good to excellent throughout central, eastern, and southern Idaho while northern Idaho streamflows will be below normal. May-September seasonal streamflow forecasts range from 71 percent of average on the St. Joe and Spokane River drainages to 268 percent of average for Lake Owyhee net inflow in southeastern Oregon. Inflows to Salmon Falls Creek Reservoir and Oakley Reservoir in southern Idaho are expected to be 222 percent and 241 percent of normal, respectively. These forecasts, coupled with current reservoir storages, indicate that both reservoirs will fill to capacity for the first time since 1921. Carry-over storage in most other reservoirs remains near to well above normal and many reservoirs in southern Idaho are being lowered in anticipation of high volume runoffs.

Snow cover conditions as of May 1 range from a low of 71 percent of average on the Spokane River drainage to a high of 276 percent of average on the Owyhee basin. Snowpack conditions increased significantly on the southern tributaries to the Snake River as a result of below normal temperatures and are well above normal snowfall. Several sites reported increases over 350 percent of normal for the month of April and most stations on the south side of the Snake are now reporting record or near record high snow water contents for May 1.

A series of Pacific storms throughout April kept Idaho cool and wet. Temperatures averaged below normal over the entire state. A brief warm spell in the middle of the month sent readings into the low 80's but a cold front on April 17 lowered temperatures by as much as 25° F.

Precipitation throughout Idaho averaged at or above normal. Heaviest amounts were reported over the southwest and southeast corners of the state where totals were 50 to 75 percent above average.

A gradual warming trend without rain is needed over areas with much above normal snowpack, where rapid or prolonged warming accompanied by heavy rain could produce excessively high peak flows. The area of greatest concern is the extreme southern portion of the state, from the Owyhee Mountains eastward to the Portneuf and Malad River drainages.

VALLEY PRECIPITATION ^{1/}

Division Averages and Departures

In Inches

DRAINAGE DIVISIONS	Winter		Fall - Winter	
	April 1984		Nov. 1983 - April 1984	
	Observed	Departure ^{2/}	Observed	Departure ^{2/}
Kootenai, Canada & U.S.	1.80	+ 0.18	13.16	- 1.85
Flathead	2.03	+ 0.39	10.02	- 2.35
Clark Fork	1.70	+ 0.37	8.23	- 1.10
Pend Oreille-Spokane	2.79	+ 0.97	20.26	+ 0.89
Upper Snake	1.41	- 0.38	13.26	+ 1.36
Snake River Plain	1.16	+ 0.17	8.65	+ 2.58
Salmon-Payette-Boise	1.99	+ 0.56	16.97	+ 3.75
Clearwater	2.58	- 0.54	20.59	- 0.41
Owyhee-Malheur	1.18	+ 0.43	10.78	+ 4.36

^{1/} Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

^{2/} Departure from 15-year (1963-1977) drainage division average.

STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
UPPER COLUMBIA BASIN						
KOOTENAI RIVER						
Leona	(at)	5840	75	May-Sep	--	7838
		5010	74	May-Jul	--	6734
PEND OREILLE RIVER						
Clark Fork River						
Whitehorse Rapids	(at)	8760	73	May-Sep	--	11930
		7830	73	May-Jul	--	10710
Pend Oreille Lake						
Inflow		9900	75	May-Sep	--	13140
		8960	76	May-Jul	--	11860
Priest River						
Priest River 1/	(at)	540	76	May-Sep	--	707
SPOKANE RIVER						
Post Falls 2/	(at)	1410	71	May-Sep	--	1988
		1340	71	May-Jul	--	1884
St. Joe River						
Calder	(at)	720	71	May-Sep	--	1019
		675	71	May-Jul	--	950
SNAKE RIVER BASIN						
SNAKE RIVER - MAIN STEM						
Moran 3/	(at)	750	85	Apr-Sep	--	880
Palisades Inflow 3/		3330	88	Apr-Sep	--	3793
Heise 4/	(nr)	3280	88	May-Sep	--	3724
		2750	88	May-Jul	--	3122
Blackfoot 5/	(nr)	4535	91	May-Sep	--	4986
		3670	91	May-Jul	--	3985
Henrys Fork						
Ashton 6/	(nr)	580	95	May-Sep	--	610
		404	95	May-Jul	--	425
Rexburg 7/	(nr)	1320	100	May-Sep	--	1324
		1000	100	May-Jul	--	1004
Falls River						
Squirrel	(nr)	344	94	Apr-Jul	--	366
Teton						
South Leigh Creek	(ab)	177	103	May-Sep	--	172
		127	103	May-Jul	--	123
St. Anthony	(nr)	481	114	May-Sep	--	423
		376	113	May-Jul	--	332
Portneuf River						
Topaz	(at)	117	162	May-Sep	--	72.3
		85	162	May-Jul	--	52.4
Oakley Reservoir						
Inflow		55	241	May-Sep	--	22.8
		47.5	240	May-Jul	--	19.8
Salmon Falls Creek						
San Jacinto	(nr)	135	222	May-Sep	--	60.9
		125	222	May-Jul	--	56.2

(c) Assuming normal meteorological conditions.

+1961-1980 period

PROSPECTIVE STREAMFLOW

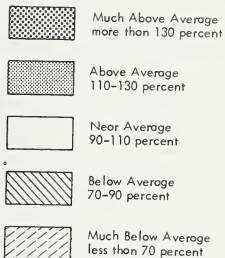
Based on Snow Surveys made on approximately

MAY 1, 1984

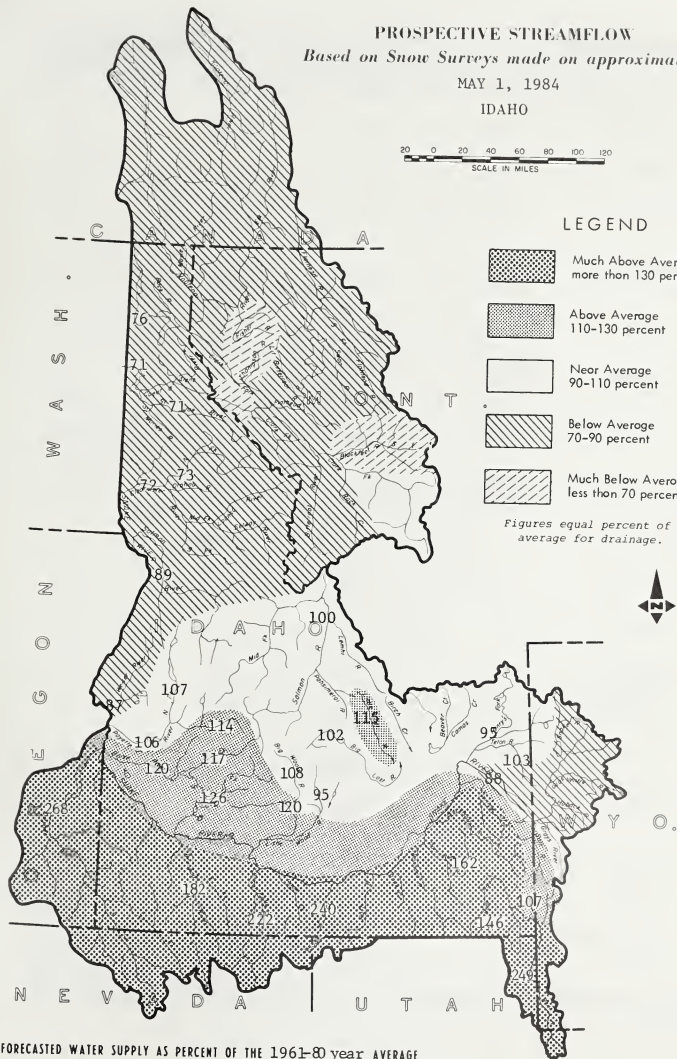
IDAHO



LEGEND



Figures equal percent of average for drainage.



FORECASTED WATER SUPPLY AS PERCENT OF THE 1961-80 year AVERAGE

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR			PAST RECORD	
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
<u>Bruneau River</u>						
Hot Springs	(nr)	320	182	May-Sep	--	176
		300	182	May-Jul	--	164
<u>Little Lost River</u>						
Howe	(nr)	43	115	May-Sep	--	37.3
		32	116	May-Jul	--	27.6
Wet Creek	(bl)	40.5	115	May-Sep	--	35.2
		32	115	May-Jul	--	27.8
<u>Big Lost River</u>						
Howell Ranch	(at)	205	102	May-Sep	--	201
		180	102	May-Jul	--	176
		137	102	May-Jun	--	134
Mackay <u>8/</u>	(nr)	175	102	May-Sep	--	172
		144	102	May-Jul	--	141
		105	102	May-Jun	--	103
<u>Big Wood River</u>						
Bellevue	(nr)	180	108	May-Sep	--	168
		166	108	May-Jul	--	154
Magic Reservoir						
Inflow <u>9/</u>		250	120	May-Sep	--	209
		234	120	May-Jul	--	195
<u>Little Wood River</u>						
Carey <u>10/</u>	(nr)	71	95	May-Sep	--	75.1
		64	94	May-Jul	--	67.3
<u>Boise River</u>						
Twin Springs	(nr)	690	117	May-Sep	--	586
		620	117	May-Jul	--	531
Boise <u>11/</u>	(nr)	1500	120	May-Sep	--	1248
		1360	120	May-Jul	--	1128
<u>South Fork</u>						
Anderson Dam <u>12/</u>	(at)	605	126	May-Sep	--	480
		556	127	May-Jul	--	439
<u>Owyhee River</u>						
Gold Cr., Nv <u>13/</u>	(nr)	65	278	Apr-Jul	--	23.4
Owyhee, Nv <u>13/</u>	(nr)	235	275	Apr-Jul	--	85.4
Lake Owyhee		574	268	May-Sep	--	214
Net inflow <u>14/</u>		502	268	May-Jul	--	187
<u>Payette River</u>						
Horseshoe Bend <u>15/</u>	(nr)	1600	106	May-Sep	--	1504
		1460	107	May-Jul	--	1367
<u>North Fork</u>						
Cascade <u>16/</u>	(at)	500	107	May-Sep	--	466
		460	107	May-Jul	--	431
Banks <u>16/</u>	(nr)	630	108	May-Sep	--	581
		585	108	May-Jul	--	540
<u>South Fork</u>						
Lowman	(nr)	507	114	May-Sep	--	444
		442	114	May-Jul	--	388
<u>Deadwood Reservoir</u>						
Inflow		136	108	May-Jul	--	126

(c) Assuming normal meteorological conditions.

+1961-1980 period

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR			PAST RECORD	
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
<u>Weiser River</u>						
Weiser	(nr)	230	87	May-Jul	--	263
<u>Salmon River</u>						
Whitebird	(at)	5580 4960	89 89	May-Sep May-Jul	-- --	6248 5583
Salmon	(nr)	1050 899	100 100	Apr-Sep Apr-Jul	-- --	1053 899
<u>Clearwater</u>						
Orofino	(at)	3120	72	May-Sep	--	4338
Spalding	(at)	5160 4750	75 74	May-Sep May-Jul	-- --	6854 6395
<u>North Fork Clearwater</u>						
Dworshak Reservoir		1710	73	May-Sep	--	2338
Inflow		1560	72	May-Jul	--	2157
<u>GREAT BASIN</u>						
<u>BEAR RIVER</u>						
Harer	(at)	468	151	Apr-Sep	624	249
<u>Montpelier Creek</u>						
Montpelier	(nr)	13.7	117	May-Sep	--	11.7
<u>Cub River</u>						
Preston	(nr)	70 63	146 147	May-Sep May-Jul	-- --	47.8 42.8

1/ Observed flow corrected for storage in Priest Lake.

2/ Observed flow corrected for storage in Coeur d'Alene Lake.

3/ Corrected for storage in Jackson Lake.

4/ Corrected for storage in Jackson Lake and Palisades.

5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henrys Lake, Grassy Lake and diversions between Heise and Blackfoot.

6/ Corrected for storage in Henrys Lake and Island Park Reservoir.

7/ Corrected for storage in Henrys Lake and Island Park, Grassy Lake and diversions between Ashton and Rexburg.

8/ Observed flow corrected for storage in Mackay Reservoir.

9/ Combined flow Big Wood River nr. Bellevue and Camas Creek near Blaine.

10/ Corrected for storage in Little Wood Reservoir.

11/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak reservoirs.

12/ Corrected for storage in Anderson Ranch Reservoir.

13/ Corrected for storage in Wildhorse Reservoir.

14/ From Bureau of Reclamation records of inflow.

15/ Corrected for storage in Cascade and Deadwood Reservoirs.

16/ Corrected for storage in Cascade Reservoir.

Cooperative forecasts released by Soil Conservation Service and National Weather Service.

(c) Assuming normal meteorological conditions.

+1961-1980 period

RESERVOIR STORAGE (1,000 Ac. Ft.)

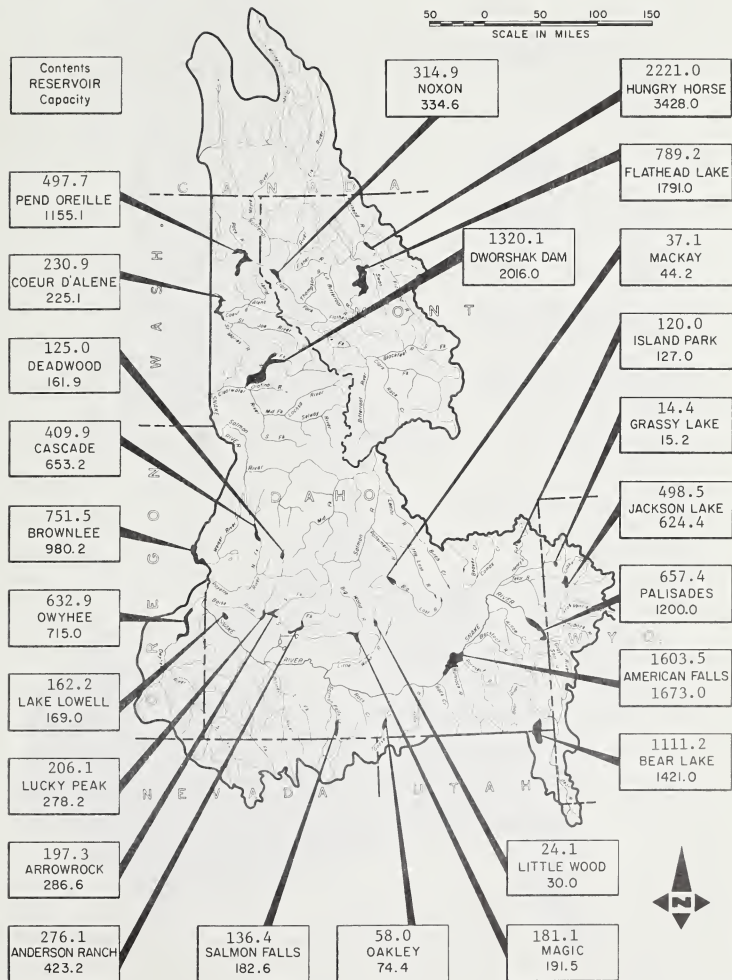
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1961- 80 AVERAGE
UPPER COLUMBIA BASIN				
Clark Fork - Pend Oreille				
Hungry Horse	3428.0	2221.0	2507.0	1982.0
Flathead	1791.0	789.2	950.8	932.7
Pend Oreille	1155.1	497.7	582.3	505.2
Noxon	334.6	314.9	312.8	250.1
Spokane				
Coeur d'Alene	225.1	230.9	182.3	257.1
SNAKE BASIN				
Snake				
Jackson Lake	624.4	498.5	506.3	517.5
Palisades	1200.0	657.4	900.5	682.4
American Falls	1673.0	1603.5	1662.7	1526.3
Island Park	127.0	120.0	122.7	125.5
Grassy Lake	15.2	14.4	13.1	11.0
Brownlee	980.2	751.5	592.0	481.0
Goose-Trapper Creeks				
Oakley	74.4	58.0	43.5	37.9
Salmon Falls Creek				
Salmon Falls	182.6	136.4	81.1	76.3
Big Lost				
Mackay	44.2	37.1	25.0	33.5
Big Wood				
Magic	191.5	181.1	168.0	165.2
Little Wood				
Little Wood	30.0	24.1	13.9	25.2
Fish Creek				
Carey Valley	14.4	13.4	13.9	--
Boise				
Anderson Ranch	423.2	276.1	216.7	284.6
Arrowrock	286.6	197.3	143.4	218.4
Lucky Peak	278.2	206.1	178.9	147.5
Lake Lowell (Deer Flat)	169.0	162.2	161.6	153.0
Owyhee				
Owyhee	715.0	632.9	677.4	525.3
Payette				
Cascade	653.2	409.9	384.4	340.5
Deadwood	161.9	125.0	127.0	94.2
Weiser				
Mann Creek	11.1	11.0	9.4	--
Clearwater				
Dworshak	2016.0	1320.1	1176.8	--
GREAT BASIN				
Bear				
Bear Lake	1421.0	1111.2	1106.4	1050.1
*Period of Record				

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MAY 1, 1984

50 0 50 100 150
SCALE IN MILES

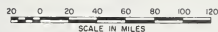
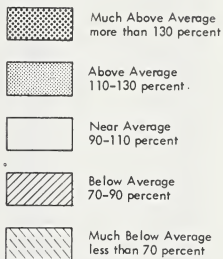


COMPARISON of SNOW COVER

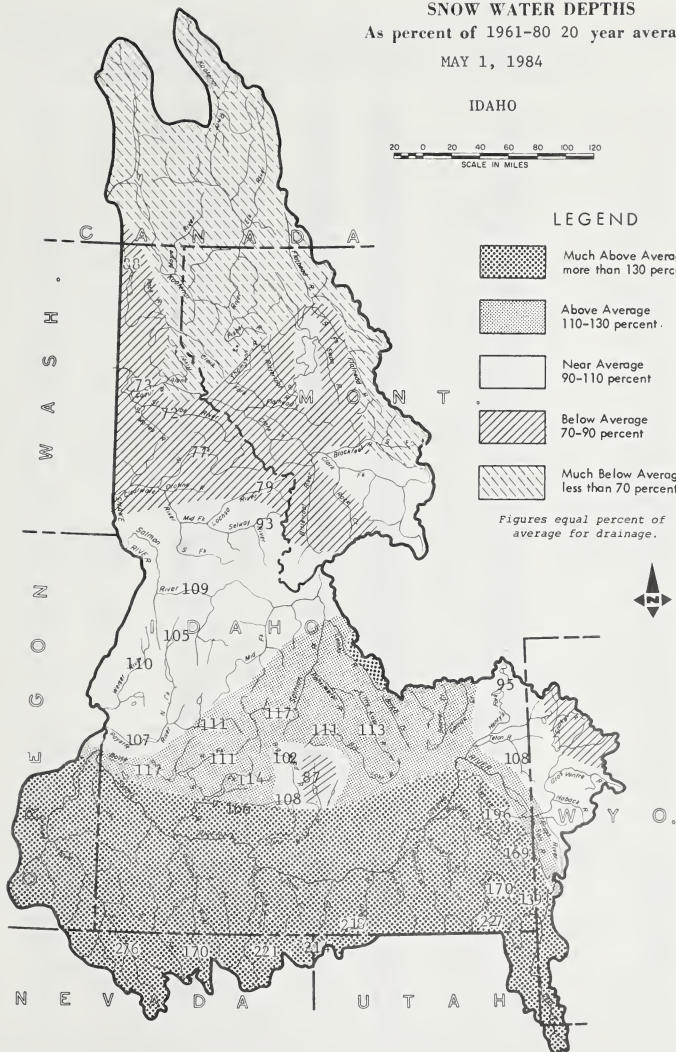
RIVER BASIN WATERSHED	NO OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF	
		LAST YEAR	1961-80 AVERAGE
<u>UPPER COLUMBIA RIVER BASIN</u>			
Kootenai River	56	67	62
Pend Oreille River	154	98	81
Clark Fork River	100	105	83
Clark Fork above Blackfoot, Mt	39	118	100
Blackfoot River, Mt	23	110	75
Flathead River, Mt	54	91	79
North Fork Flathead, Mt	10	69	67
Middle Fork Flathead, Mt	11	87	65
South Fork Flathead, Mt	13	101	91
Bitterroot River, Mt	21	112	88
Priest River	4 - 5	65	88
Spokane River	14 - 18	90	71
Coeur d'Alene River	5 - 6	85	73
St. Joe River	8 - 11	91	72
<u>LOWER SNAKE RIVER BASIN</u>			
Clearwater River	22 - 23	105	80
North Fork Clearwater	13 - 14	93	77
Lochsa	5	108	79
Selway	6	143	93
Salmon River	17 - 19	97	109
Salmon Ab. Salmon	5 - 6	92	117
Lemhi River	2	211	159
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	2 - 4	72	113
Big Lost River	5	66	111
Little Wood River	4	46	87
Big Wood River	9 - 10	70	108
Big Wood River Ab. Magic Reservoir	7 - 8	70	102
Camas Creek	2	73	166
Boise River	12 - 15	78	117
Middle Fork Boise	7 - 10	79	111
South Fork Boise	6	77	114
Payette River	13 - 15	89	107
South Fork Payette	5 - 6	79	111
North Fork Payette	8 - 9	96	105
Weiser River	4 - 6	110	110
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	1	129	218
Goose-Trapper Creeks	2	-	214
Salmon Falls Creek	5 - 8	137	221
Bruneau River	2	138	170
Owyhee River Ab. Owyhee Lake	5	131	276
<u>UPPER SNAKE RIVER BASIN</u>			
Upper Snake Ab. Palisades Reservoir	13	100	99
SNAKE Ab. Jackson, Wy	2	85	88
Gros Ventre, Wy	3	98	93
Greys River, Wy	2	106	98
Salt River, Wy	4	114	130
Henry's Fork River	10	82	95
Teton River	9 - 10	92	108
Willow Creek	7 - 9	87	196
Blackfoot River	2 - 3	82	169
<u>GREAT BASIN</u>			
Bear River	6	104	119
Montpelier Creek	5 - 6	111	139
Mink Creek	1 - 2	111	170
Cub River	2 - 3	266	227

SNOW WATER DEPTHS
As percent of 1961-80 20 year average
MAY 1, 1984

IDAHO

**LEGEND**

*Figures equal percent of
average for drainage.*



SNOW

SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME & DRAINAGE		Elevation				Last Year	Average
Above Burke		Coeur d'Alene	4100	4/30	25	9.8	13.4
Afton Ranger Sta.	(Wy)	Salt River	6240	4/27	0	0.0	0.0
Aspen Grove		Willow	6500	4/30		12.5e	--
Atlanta Summit		Boise	7600	5/4	102	39.3	49.0
Atlanta Townsite		Boise	5370	5/4	0	0.0	7.2
Bad Bear		Boise	4940	5/1	13	5.8	6.0
Badger Gulch		Trapper	6660	5/2	51	22.7	--
Banner Summit		Payette	7040	5/4	74	29.5	35.3
Beagle Springs	(Mt)	Beaverhead	8850	4/28	44	13.2	11.5
Bear Basin		Little Salmon	5350	4/27	52	20.9	22.8
Bear Canyon		Big Lost	7900	5/7	46	16.6	27.0
Bear Mountain		Clark Fork	5400	4/25	93	42.6	69.4
Benton Meadow		Priest	2370	4/27	0	0.0	0.0
Benton Spring		Priest	4920	4/27	34	12.8	19.5
Big Creek Summit		Salmon	6580	4/27	90	37.1	46.7
Big Springs		Henry's Fork	6400	5/1	41	17.0	16.8
Birch Creek		Willow	6800	4/30	24	8.4	6.2
Black Bear	(Mt)	Madison	7950	5/1	98	40.4	48.5
Bloody Dick	(Mt)	Beaverhead	7600	4/26	45	13.0	13.4
Blue Ridge		Blackfoot	6780	4/30	61	23.4	24.3
Bogus Basin		Payette	6340	5/1	80	34.5	39.8
Bogus Basin Road		Boise	5540	5/1	0	0.0	0.3
Bone		Willow	6200	4/30	7	1.9	0.0
Boulder Creek		Weiser	5440	5/1	50	19.2	20.4
Breezy Saddle		Clearwater	5010	4/30	51	17.6	21.8
Brockman Station		Willow	6430	4/30	21	8.4	7.1
Brundage Mountain		Little Salmon	7560	4/29	117	49.5	62.0
Bruno Creek		Salmon	7920	5/2	48	17.3	20.4
Bryan Flat	(Wy)	Hoback	6420	4/24	10	3.3	3.8
Buck Meadows		Selway	5650	4/27	82	26.9	18.6
Cayuse Airstrip		Clearwater	3500	4/27	0	0.0	0.0
CCC Camp	(Wy)	Salt	7000	4/26	37	13.2	11.8
Cedar Creek		Cedar	6820	4/30	49	20.6	--
Cold Springs		Portneuf	7000	4/29	70	26.8	--
Conie Ridge		Hayden	3900	5/1	0	0.0	--
Coolwater Mountain		Lochsa	6030	4/27	109	38.0	32.7
Copper Basin		Big Lost	7640	5/7	26	10.0	14.9
Copper Ridge		Coeur d'Alene	4820	4/30	47	20.9	20.5
Corner Creek		Hayden	3150	5/1	0	0.0	--
Couch Summit		Boise	6840	4/28	48	18.5	26.7
Cozy Cove		Deadwood	5380	5/4	19	8.1	12.7
Crater Meadows		Clearwater	5960	4/27	101	40.3	35.6
Crawford Ranger Sta.		Payette	4860	4/27	0	0.0	0.0
Crooked Fork		Lochsa	3610	5/1	0	0.0	0.0
Cub River Ranger Sta.		Cub	5450	4/27	14	5.1	0.0
Dad Creek Lake	(Mt)	Beaverhead	8400	4/28	87	19.8	16.2
Darby Canyon	(Wy)	Teton	8250	4/30	73	28.1	28.3
Darkhorse Lake	(Mt)	Big Hole	8600	4/28	83	33.4	26.6
Deadline		Salmon Falls	7400	4/30	83	36.0	29.9
Deadline South		Salmon Falls	7450	4/30	122	51.0	37.4
Deadwood Airstrip		Deadwood	5360	5/1		9.4e	13.3
Deadwood Summit		Deadwood	6860	5/4	98	42.8	38.7
Dollarhide Summit		Big Wood	8420	5/7	73	27.2	38.2
East Rim Divide	(Wy)	Hoback	7930	4/26	31	9.1	10.4
Elk Butte		Clearwater	5550	4/30	71	26.9	23.8
Emigrant Summit		Bear	7390	4/30	81	33.4	30.1
Emigration Canyon		Bear	6500	4/30	22	9.2	--
Fish Lake Airstrip		Lochsa	5650	4/27	80	28.0	29.0
Fishpole Lake		Big Lost	9300	5/7	80	29.6	40.7
Forty-nine Meadows		Clearwater	4830	4/30	46	16.5	20.6
Fourth of July Summit		Coeur d'Alene	3200	5/1	0	0.0	--
Franklin Basin		Cub	8040	4/27	79	33.6	--
Freds Mountain	(Wy)	Teton	8150	4/30		28.1e	29.7
Galena		Big Wood	7440	5/2	40	14.7	23.1
Galena Summit		Big Wood	8780	5/2	73	26.0	35.2
Garfield Ranger Sta.		Little Wood	6560	5/7	0	0.0	10.9
Gibbons Pass	(Mt)	Bitterroot	7100	4/26	65	24.7	25.0
Givewent		Montpelier	6860	4/30	30	13.0	11.1
Goat Creek		Salmon Falls	8880	4/30	96	36.0	26.8
Goat Lake		Clearwater	6500	4/27	106	37.7	39.6
Gold Stone	(Mt)	Beaverhead	8100	4/26	58	17.6	18.4
Graham Guard Sta.		Boise	5690	5/4	21	8.8	14.1
Graham Ranch		Big Wood	6270	5/2	30	11.2	17.5

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(c) Snow course data estimated from automated Snotel readings

(*) Estimated 1961-1980 20 year average

1/ Data readings as reported by automated Snotel system

SNOW

SNOW COURSE			THIS YEAR			PAST RECORD	
NAME & DRAINAGE	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (%)	Last Year	Average
Granite Peak	St. Joe	6000	4/30	85	29.3	37.0	--
Grassy Lake	(Wy) Henrys Fork	7265	4/30	80	33.6	37.8	35.4
Greys Boundary	(Wy) Greys	5720	4/27	18	6.0	4.4	3.2
Gros Ventre Summit	(Wy) Gros Ventre	8750	5/2	40	12.6	10.5	11.8
Crover Park Divide	(Wy) Salt	7000	4/26	38	14.0	10.6	9.6
Heart Lake Trail	(Mt) Clark Fork	4800	4/29	27	11.3	9.0	18.4
Hemlock Butte	Clearwater	5810	4/27	112	41.6	37.8	50.1
Hilts Creek	Little Lost	8000	4/30	41	11.0	18.4	--
Hoodoo Basin	(Mt) Clark Fork	6000	4/29	98	42.8	45.7	54.5
Hoodoo Creek	(Mt) Clark Fork	5900	4/29	89	39.4	41.4	50.7
Howell Canyon	Marsh Creek	7980	5/1	114	48.4	37.4	22.2
Humboldt Gulch	Coeur d'Alene	4250	4/30	11	4.6	11.0	--
Hyndman Creek	Big Wood	7440	5/7	28	10.0	19.0	--
Idaho City Townsite	Boise	4000	5/1	0	0.0	0.0	--
Indian Meadows	Teton	8240	4/30	101	43.2	48.2	38.8*
Island Park	Henrys Fork	6290	5/1	27	11.4	14.4	11.0*
Jackpine Creek	(Wy) Teton	7350	4/30	56	21.2	25.0	21.7
Jacks Peak	(Nv) Owyhee	8420	5/1	125e	48.8e	39.7	26.8
Jackson Peak	Boise	7070	5/4	83	33.7	39.4	31.3*
Kruze Meadow	Clearwater	4780	4/30	25	7.8	--	--
Lake Fork	Payette	5290	4/28	40	15.4	12.9	13.1*
Lakeview Canyon	(Mt) Beaverhead	6930	4/26	34	9.6	19.4	12.6
Lakeview Ridge	(Mt) Beaverhead	7400	4/26	31	9.2	17.3	10.5
Langford Flat Creek	Salmon Falls	5980	4/30	16	5.8	--	--
Laurel Draw	(Nv) Owyhee	6700	5/1	34e	13.6e	8.6	1.3
Lava Creek	Willow	7350	4/30	46	17.2	17.6	9.0*
Lemhi Pass	(Mt) Beaverhead	7480	4/28	40	13.2	5.0	7.4
Lemhi Ridge	(Mt) Beaverhead	8100	4/28	47	15.5	8.6	10.6
Lewis Lake Divide	(Wy) Snake	7850	4/30	82	36.4	44.6	44.1
Little Beaver	Montpelier	6970	4/30	39	16.7	14.0	10.7*
Lolo Pass	Lochsa	5240	5/1	44	18.6	15.8	30.0*
Lookout	Coeur d'Alene	5140	4/30	55	23.8	30.6	33.7
Lost Horse	(Mt) Bitterroot	5940	4/27	72	29.6	26.8	34.9
Lost Lake	Clearwater	6110	4/30	118	46.2	49.4	59.1*
Lost-Wood Divide	Big Lost	7900	5/7	54	20.6	30.0	22.6*
Lower Home Canyon	Montpelier	7640	4/30	41	14.0	12.6	11.9*
Lower Sands Creek	Coeur d'Alene	3120	4/30	33	14.2	13.1	17.0
Madison Plateau	(Mt) Madison	7750	5/1	58	21.8	27.2	23.6
Magic Mountain	Rock Creek	6880	4/30	85	35.0	22.1	17.5*
Mascot Mine	Big Wood	7780	5/7	38	13.1	22.4	14.8*
McDonalds Reservoir	Teton	6720	4/30	49	19.8	19.0	16.6*
Mill Creek Summit	Salmon	8800	5/1	73	25.5	28.6	24.4*
Montpelier Creek	Montpelier	6540	5/1	5.2e	4.2	1.1*	
Moonshine	Little Lost	7440	4/27	35	9.5	11.0	9.3*
Moore Creek Summit	Boise	6100	5/1	83	37.2	44.0	31.4
Moose Creek	North Fork Salmon	6200	4/27	52	17.8	14.6	14.6*
Morgan Creek	Salmon	7600	5/1	49	16.7	14.4	12.7*
Mountain Meadows	Selway	6360	4/27	72	25.0	13.1	24.0
Mud Creek	Willow	7100	4/30	77	28.9	29.1	9.5*
Mulderce	Little Wood	6320	5/7	0	0.0	3.3	0.4*
Nez Perce Pass	(Mt) Bitterroot	6570	4/28	44	12.8	12.0	15.9
Packsaddle Spring	Teton	8200	4/30	80	32.1	34.0	--
Phillips Bench	(Wy) Teton	8200	4/24	70	26.8	30.0	32.0
Pierce Ranger Sta.	Clearwater	3080	4/27	0	0.0	0.0	1.4*
Pine Creek Pass	Teton	6810	4/30	42	15.4	15.1	13.0
Poison Meadows	(Wy) Greys	8500	5/2	80	28.2	27.8	31.8
Pole Creek Ranger Sta.	Jarbridge	8360	4/30	106	40.0	28.4	24.4*
Putnam	Portneuf	7220	4/29	55	21.3	--	--
Road Creek	Boise	5380	5/4	2	0.7	0.0	--
Rock Flat Summit	Payette	5310	4/27	48	21.2	23.0	16.9
Saddle Mountain	(Mt) Bitterroot	7940	4/26	76	28.4	27.0	28.7
Sage Creek Saddle	Hayden	4080	5/1	24	10.4	17.0	17.6*
Salt River Summit	(Wy) Salt	7700	4/26	46	15.8	15.2	14.5
Savage Pass	Lochsa	6170	4/30	60	22.6	21.7	28.5*
Sawmill Canyon	Little Lost	7000	4/27	16	4.7	5.4	--
Sawtell Mountain	Henrys Fork	8720	5/1	106	39.5	51.7	38.5*
Schweitzer Basin	Pend Oreille	6090	4/29	95	42.2	69.5	--
Schweitzer Bowl	Pend Oreille	4800	4/29	48	20.3	36.3	23.7*
Schweitzer Ridge	Pend Oreille	6200	4/29	97	43.6	58.7	47.8*
Secesh Summit	Payette	6520	4/28	83	35.0	42.4	34.3*
Shanghai Summit	Clearwater	4570	4/27	48	16.8	13.2	21.2
Sheep Mountain	Willow	6570	4/30	26	9.5	12.8	4.9

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(c) Snow course data estimated from automated Snotel readings

(*) Estimated 1961-1980 20 year average

/ Data readings as reported by automated Snotel system

SNOW

SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME & DRAINAGE		Elevation				Last Year	Average
Sherwin	St. Maries	3200	4/30	3	1.4	0.0	5.5*
Shoshone Basin	Salmon Falls	5810	4/30	16	6.2	--	1.8*
Skirish Ridge	Coeur d'Alene	5110	4/30	64	29.8	32.1	--
Slag-a-melt Lake	(Mt) Big Hole	8750	5/1	89e	31.0e	33.5	28.7
Slug Creek	Blackfoot	7230	4/30	45	17.6	15.6	13.9*
Smith Creek	Kootenai	4800	4/30	76	33.9	51.0	45.7
Snow King Mtn. #3	(Wy) Gros Ventre	7660	4/24	33	11.6	15.0	13.4
Soldier Ranger Sta.	Big Wood	5740	4/28	15	6.1	6.9	0.9*
Somsen Ranch	Willow Creek	6840	5/2	42	16.1	14.5	--
South Mountain	Jordan-Owyhee	6500	5/1	56	22.8	22.9	7.7*
Squaw Flat	Weiser	6240	4/28	59	23.8	32.8	21.6*
Squaw Meadow	Payette	5900	4/28	80	36.2	47.4	34.5*
State Line	Teton	6660	4/31	36	12.1	13.2	9.0
Stickney Mill	Big Lost	7430	5/7	20	8.0	14.8	5.7*
Strawberry Creek	Mink	5820	4/30	26	12.2	--	3.3*
Suede Peak	Little Wood	7640	5/7	39	14.5	26.5	15.8*
Targhee Pass	Henrys Fork	6980	5/1	14	14.3e	14.2	13.2*
Taylor Canyon	(Nv) Owyhee	6200	4/24	22	8.7	0.0	0.5
Teton Pass W.S.	(Wy) Teton	7740	4/24	68	28.4	38.2	28.4
Tex Creek	Willow	6650	5/1	--	9.8e	--	6.1*
Togwotee Pass	(Wy) Snake	9580	5/1	83	30.4	30.2	33.8
Toponce	Portneuf	6160	4/29	33	14.2	--	--
Trail Creek	(Mt) Beaverhead	7090	4/28	38	12.2	4.1	7.9
Trinity Mountain	Boise	7770	5/7	111	47.5	61.7	43.3*
Twelve Mile Creek	(Mt) Bitterroot	5600	4/24	34	14.6	8.2	16.7
Twin Lakes	(Mt) Bitterroot	6510	4/27	95	38.8	35.0	46.5
Upper Home Canyon	Montpelier	8560	4/30	76	29.3	27.6	23.8*
Upper Jack Creek	(Nv) Owyhee	7250	5/1	50e	19.4e	15.5	4.7
Valley View	Henrys Fork	6680	5/1	32	11.4	16.3	13.2*
Vienna Mine	Salmon	8960	5/7	99	39.3	47.6	38.8*
Webb Creek	Clearwater	4720	4/30	23	7.6	--	--
West Branch	Weiser	5560	5/1	59	23.2	24.0	--
West Creek Summit	Little Lost	7680	4/30	46	13.8	19.1	11.4*
Whiskey Creek	(Mt) Madison	6800	5/1	44	16.0	20.3	19.3
Whiskey Flat	Montpelier	6960	5/1	--	7.9e	7.8	4.2*
White Elephant	Henrys Fork	7710	5/1	66	23.9	32.0	25.7*
Willow Flat	Cub	6070	4/27	46	20.4	9.6	5.2*
Wilson Creek	(Nv) Salmon Falls	7500	4/30	67	28.7	--	6.2*

SNOTEL^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (Inches)	Precipitation Water Year (Accumulation) (Inches)
Atlanta Summit	Boise	5/1	35.5	40.2
Banner Summit	Payette	5/1	28.2	36.4
Base Camp	Upper Snake	5/1	14.2	23.7
Bear Basin	Little Salmon	5/1	23.1	33.6
Bear Canyon	Big Lost	5/1	18.4	23.2
Bear Creek	Jarbridge	5/1	42.5	40.2
Bear Mountain	Clark Fork	5/1	40.2	58.2
Bear Saddle	Mann Creek	5/1	29.3	35.1
Bennett Mountain	Canyon Creek	5/1	26.9	31.6
Big Creek Summit	Salmon	5/1	34.7	42.2
Big Sandy Opening	Green	5/1	NA	14.3
Blind Bull Summit	Green	5/1	26.6	23.7
Bostetter Ranger Station	Trapper	5/1	NA	27.6
Bunchgrass Meadow	Pend Oreille	5/1	28.4	41.8
Cottonwood Lake	Salt	5/1	23.1	33.2
Cozy Cove	Deadwood	5/1	11.0	31.3
Crab Creek	Camas-Beaver	5/1	16.7	26.3
Deadwood Summit	Deadwood	5/1	46.8	49.6
Dollarhide Summit	Big Wood	5/1	30.3	32.3
Elk Butte	Clearwater	5/1	38.8	48.6
Elkhart Park Guard Station	Green	4/30	13.9	17.2
Emigrant Summit	Bear	5/1	41.8	41.6
Franklin Basin	Cub	5/1	22.9	40.9
Galena	Big Wood	5/1	16.8	25.2

(A) Aerial observation, water content estimated

(b) 1961-80, 20 year average

(c) Snow course data estimated from automated Snotel readings

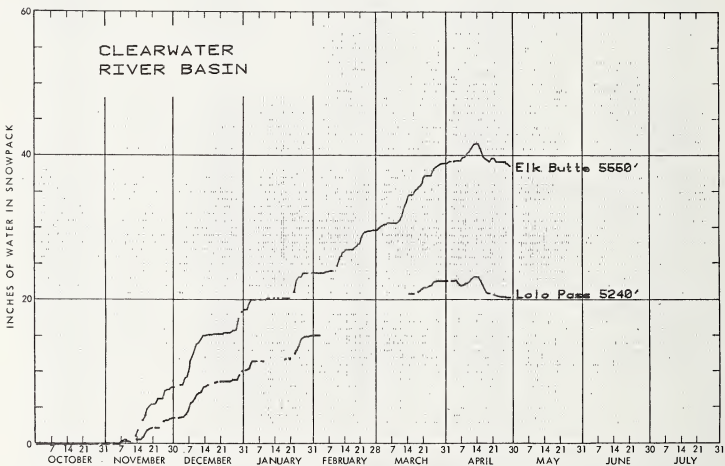
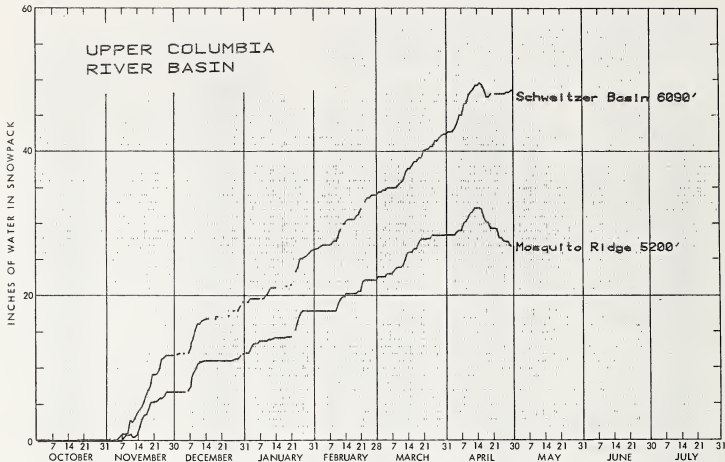
(*) Estimated 1961-1980 20 year average

^{1/} Data readings as reported by automated Snotel system

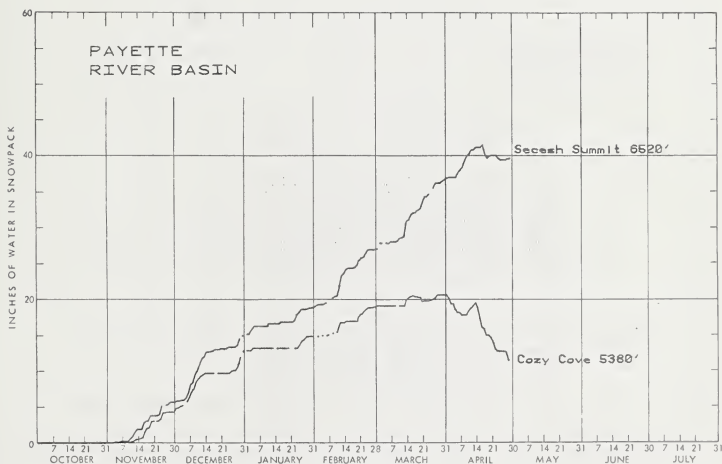
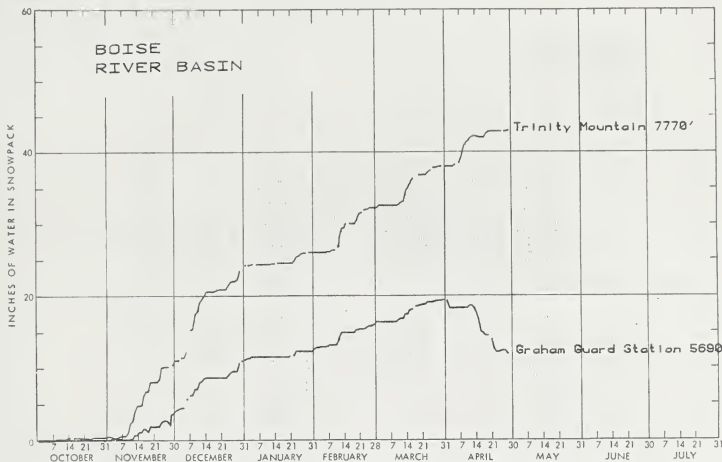
SNOTEL^{1/}

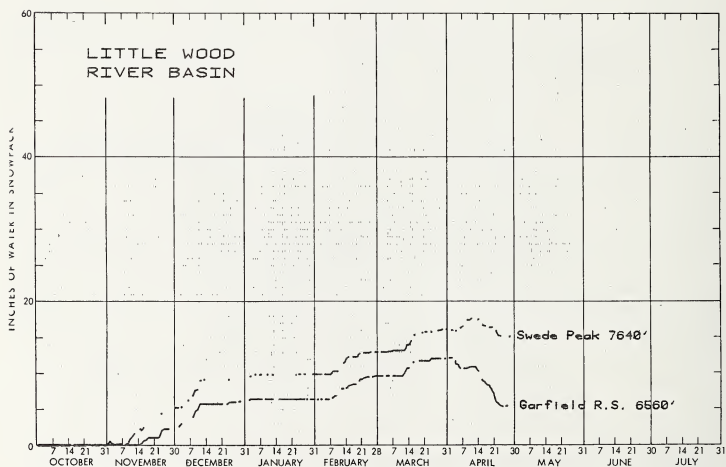
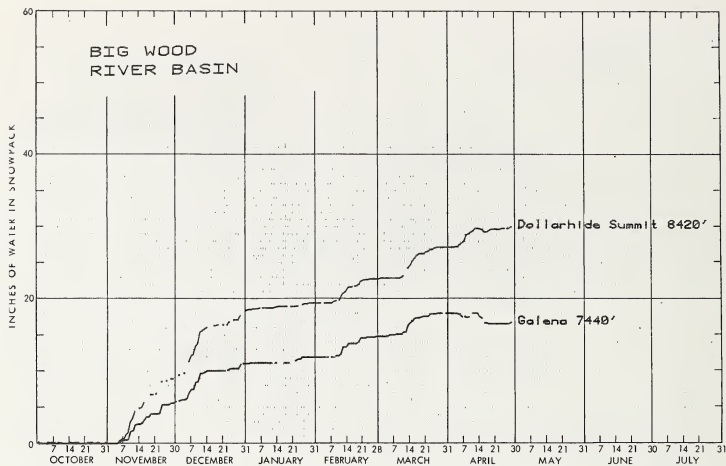
Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulation) (inches)
Galena Summit	Big Wood	5/1	NA	26.9
Garfield Ranger Station	Little Wood	5/1	5.6	17.9
Giveout	Montpelier	5/1	10.6	15.9
Goat Creek	Salmon Falls	5/1	40.1	40.9
Graham Guard Station	Boise	5/1	11.6	29.4
Grassy Lake	Upper Snake	5/1	NA	46.4
Gros Ventre Summit	Upper Snake	5/1	14.1	14.7
Hemlock Butte	Clearwater	5/1	48.1	57.2
Hills Creek	Little Lost	5/1	15.3	16.4
Howell Canyon	Marsh Creek	5/1	41.9	44.8
Humboldt Gulch	Coeur d'Alene	5/1	2.9	36.5
Hyndman	Big Wood	5/1	10.3	19.8
Indian Creek	Green	5/1	30.6	31.3
Island Park	Henrys Fork	5/1	13.6	25.6
Jackson Peak	Boise	5/1	33.9	40.9
Kelly Ranger Station	Green	5/1	21.3	23.8
Lewis Lake Divide	Upper Snake	5/1	30.0	41.4
Lolo Pass	Lochsa	5/1	20.4	29.0
Lookout	Coeur d'Alene	5/1	NA	38.2
Loomis Park	Green	5/1	15.7	19.2
Lost Lake	Clearwater	5/1	58.6	60.7
Lost-Wood Divide	Big Lost	5/1	21.8	26.9
Magic Mountain	Rock Creek	5/1	35.0	42.4
Meadow Lake	Lemhi	5/1	NA	24.9
Mill Creek Summit	Salmon	5/1	21.5	25.3
Moonshine	Little Lost	5/1	13.8	19.8
Moore Creek Summit	Boise	5/1	40.2	43.5
Moose Creek	North Fork Salmon	4/24	20.6	25.4
Morgan Creek	Salmon	5/1	17.2	23.2
Mosquito Ridge	Coeur d'Alene	5/1	27.9	40.2
Mountain Meadows	Selway	5/1	33.9	40.2
Mud Flat	Owyhee	5/1	0.0	20.8
Oxford Spring	Malad	5/1	14.7	36.1
Phillips Bench	Upper Snake	5/1	29.8	32.4
Pole Creek Ranger Station	Salmon Falls	5/1	37.5	23.6
Prairie	Boise	5/1	0.0	23.1
Pullman	Palouse	5/1	NA	NA
Salt River Summit	Salt	5/1	14.6	23.4
Savage Pass	Lochsa	5/1	23.5	31.9
Schweitzer Basin	Pend Oreille	5/1	48.6	42.3
Secesh Summit	Payette	5/1	40.3	47.9
Shanghai Summit	Clearwater	5/1	21.4	42.1
Sheep Mountain	Willow	4/23	12.5	21.6
Sherwin	St. Maries	5/1	2.1	35.4
Slug Creek Divide	Blackfoot	5/1	22.0	27.2
Snider Basin	Green	5/1	11.5	14.7
Somsen Ranch	Willow Creek	5/1	14.8	23.0
South Lind Experiment Sta.	Walla Walla	5/1	NA	8.4
South Mountain	Jordan-Owyhee	5/1	NA	30.5
Spring Creek Divide	Green	5/1	26.4	28.1
Squaw Flat	Weiser	5/1	24.3	35.3
Stickney Mill	Big Lost	5/1	9.0	13.2
Sunset	Coeur d'Alene	4/27	32.9	41.5
Suede Peak	Little Wood	5/1	15.3	22.9
Topvotee Pass	Upper Snake	5/1	26.5	32.7
Touchet #2	Touchet	5/1	NA	NA
Trinity Mountain	Boise	5/1	43.7	49.4
Two Ocean Plateau	Upper Snake	5/1	26.8	29.1
Vienna Mine	Salmon	5/1	38.6	35.8
West Branch	Weiser	5/1	26.4	39.3
White Elephant	Henrys Fork	5/1	26.9	37.0
Wildhorse Divide	Portneuf	5/1	NA	38.8
Willow Creek	Greys	5/1	42.6	46.5

^{1/} Data readings as reported by automated Snotel system.
 NA Data not available.

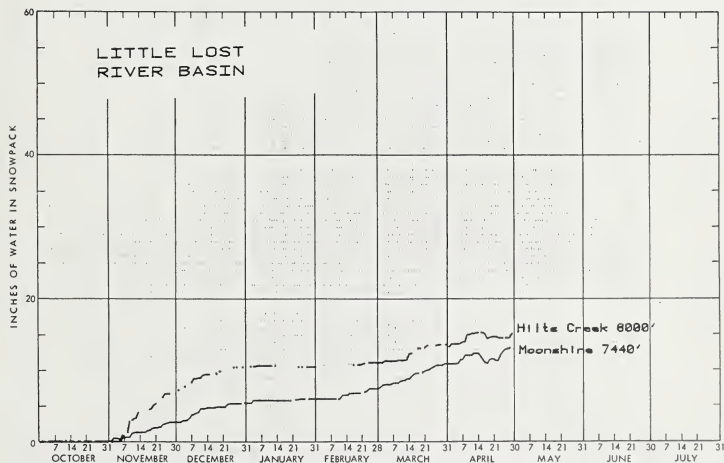
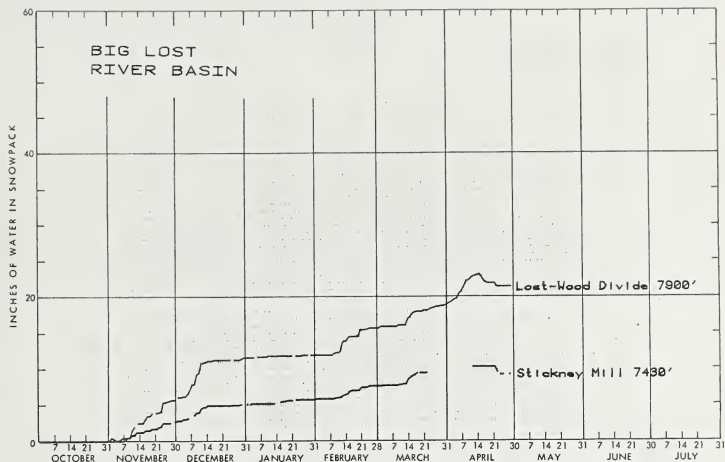


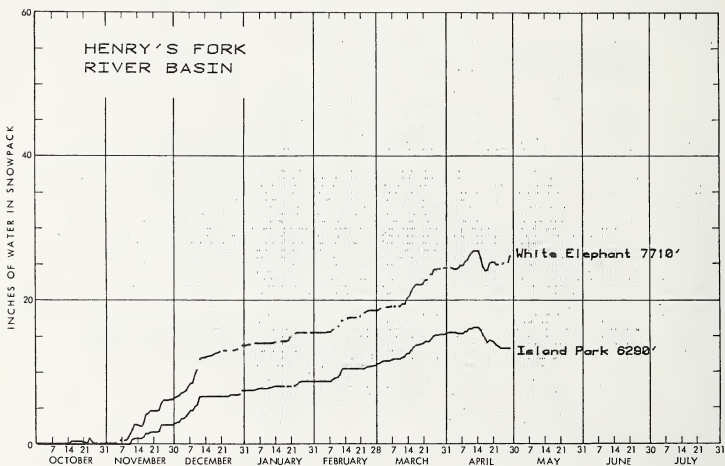
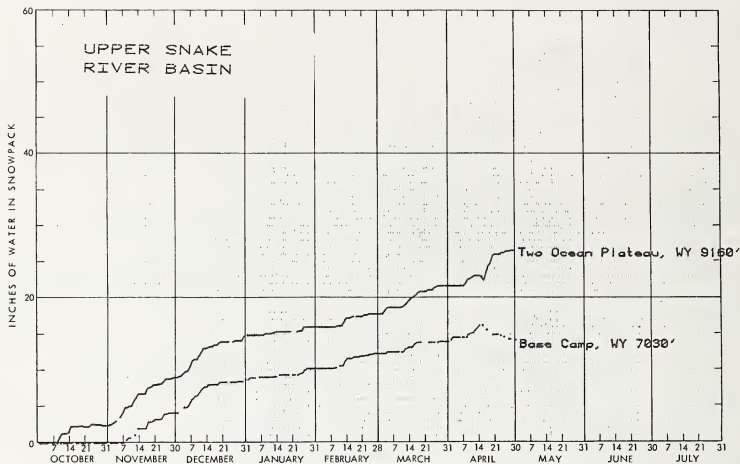
W-11-10



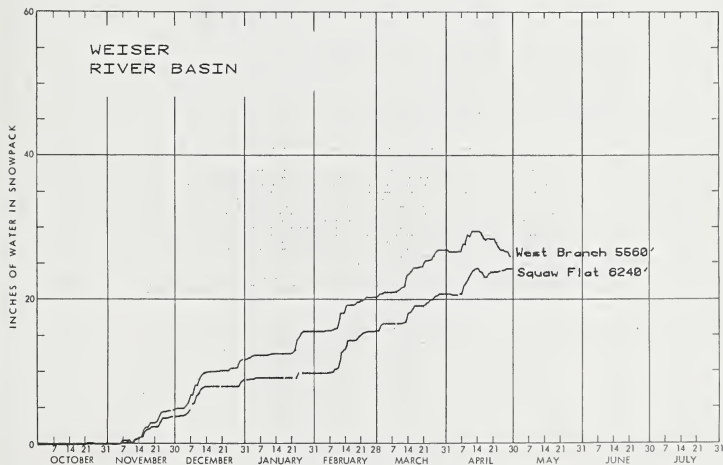
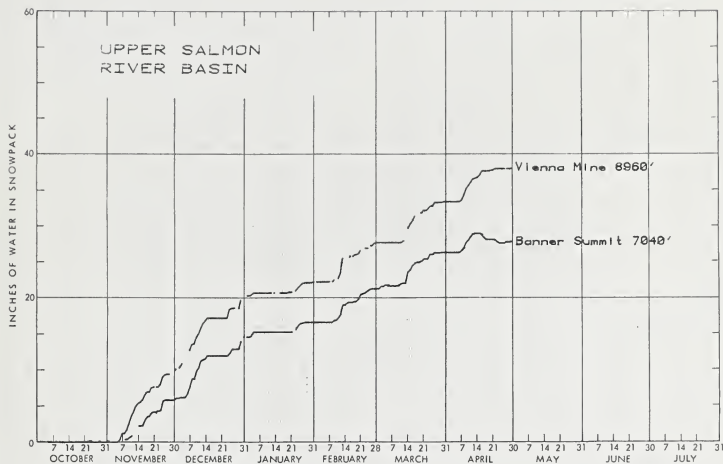


WDA-113C

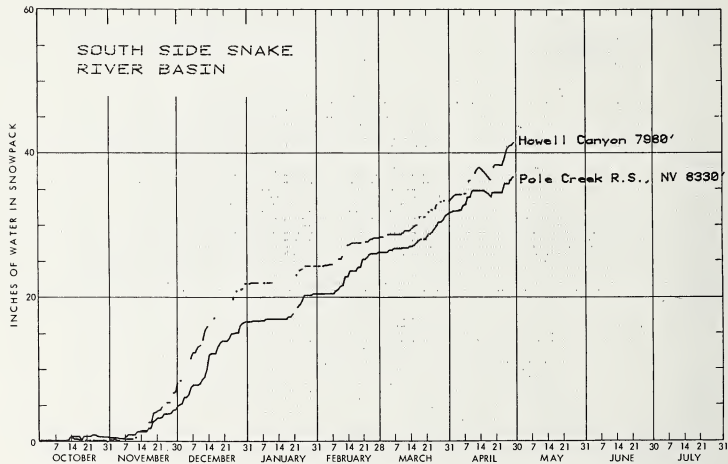
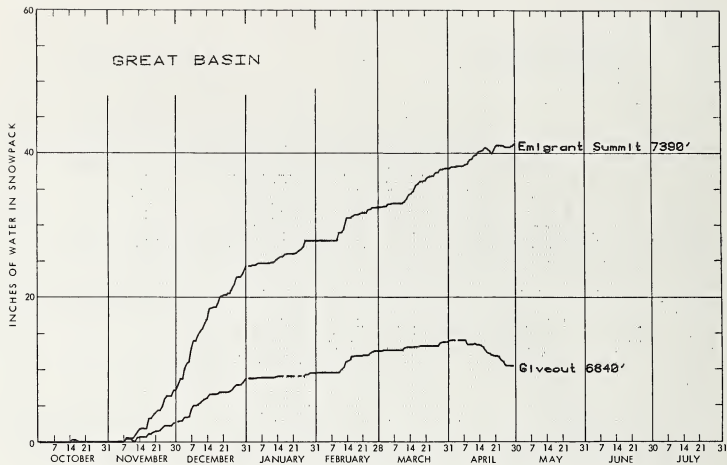




WSR-113C



W28.6-13C



GOVERNMENT AGENCIES

States

Idaho Department of Water Resources
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of Interior
Bureau of Reclamation
Water Resources Division, Geological Survey
Shoshone-Bannock Tribal Council

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

PRIVATE ORGANIZATIONS

FMC Corporation
Cyprus Mining Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Room 345
304 N. 8TH ST.
BOISE, IDAHO 83702

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

THIRD CLASS BULK RATE
POSTAGE AND FEES PAID
USDA - SCS
PERMIT NO. G-267

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*

DR. ALBERT RANGO - CHIEF
HYDROLOGY LABORATORY
RM. 139 - BLDG. 007
USDA - ARS - BARC-WEST
BELTSVILLE MD 20705